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ABSTRACT

Project IMPACT, a magnet program in its third and final year of funding, provided instruction in ESL and Italian language skills, as well as bilingual instruction in mathematics, social studies and typing to approximately 200 students of limited English proficiency in a Brooklyn, New York, high school. Nearly all program students were born in Italy; they varied in English language proficiency, native language ability, and overall academic preparedness. Transitional in nature, Project IMPACT aimed to expedite the acquisition of English language skills necessary for full mainstreaming within one or two years of entering the program. Title VII funds supported administrative and support services staff. In addition to the student services provided, the program focused on curriculum development, staff development, and parent participation. Students were assessed in English language development, growth in mastery of Italian, and in mathematics, science, social studies, and attendance. Analysis of student data from 1982-1983 indicated: (1) substantial improvement of students tested in English on Level III (but not Level II) of the Stanford Achievement Test; (2) a passing rate for program students greater than that of non-program students on the New York State Regents Examination in Italian; (3) achievement of program objectives in mathematics, science, and social studies; and (4) higher attendance rates among IMPACT students than among the school population as a whole. (GC)

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NEW UTRECHT HIGH SCHOOL

PROJECT IMPACT

1982-1983

OEE Evaluation Report

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UD023634

O.E.E. Evaluation Report

February, 1984

Grant Number: G00-800-6389

NEW UTRECHT HIGH SCHOOL

PROJECT IMPACT

1982-1983

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A SUMMARY OF THE EVALUATION
FOR PROJECT IMPACT
NEW UTRECHT HIGH SCHOOL
1982-1983

This magnet program, in its third and final year of funding, provided instruction in E.S.L. and Italian language skills, as well as bilingual instruction in mathematics, social studies, and typing to approximately 200 students of limited English proficiency in grades nine through twelve. Nearly all program students were born in Italy and all spoke Italian at home as their first language. The students varied in English language proficiency, ability in the native language, and overall academic preparedness.

The program is transitional in nature. One of its major goals was to expedite the acquisition of the English language skills necessary for full mainstreaming within one or two years of entering the program. A gradual transition into the mainstream was accomplished by initially placing students in one English-only class, usually mathematics; the other mainstream courses were added as the students' proficiency in English increased.

Title VII funds supported administrative and support services staff. Cuts in Title VII funding since the 1981-82 year resulted in the reassignment of one curriculum specialist and one guidance counselor to tax-levy positions. Instructional services were funded by a combination of tax-levy, Module 5B, and T.P.R.C. monies. Curriculum development was a major focus of the program in its first two, but not its last year. Materials were modified in computer science and developed in typing. Supportive services to program students were provided on a regular basis by all project staff and consisted of home visits, referrals to outside agencies, and vocational guidance. Development activities for staff members were done primarily on an informal basis and included consultation with teacher trainers, and attendance at workshops, professional conferences, and university courses. Parents of participating students were involved through informational notices, home visits, phone calls, and participation in extracurricular activities. Low attendance at meetings of the Parent/ Student/Community Advisory Committee was cited as a major problem.

Students were assessed in English language development (Stanford Achievement Test [SAT]); growth in their mastery of Italian (New York Regents Examination in Italian); mathematics, science, and social studies (teacher-made tests); and attendance (school and program records). Quantitative analysis of student achievement indicates that:

-- Students tested on the SAT Level III scored significantly higher on the post-test, with an effect size of 1.15, indicating a substantial improvement. The post-test scores of Level II students did not differ significantly from the pre-test results.

-- The passing rate for program students was greater than that of non-program students on the New York State Regents Examination in Italian.

-- Program objectives of an 80 percent passing rate were achieved in the content areas of mathematics, science, and social studies in both fall and spring semesters.

-- Program students had a significantly higher rate of attendance than did the school population as a whole.

The following recommendations are offered for extended bilingual services at New Utrecht:

-- Expanding and formalizing training efforts aimed at enabling teachers and staff to work most effectively with the increased number of Hispanic and Chinese students now entering the school.

-- Focusing on curriculum development and encouraging project staff to work closely with those schools which have already developed extensive materials in Spanish and Chinese.

-- Refining the program's record-keeping process in an effort to improve communication among staff members who will be working with students from each of the three language groups, and to facilitate individualized services based on students' needs.

ACKNOWLEDGEMENTS

The production of this report, as of all O.E.E. Bilingual Educa tion Evaluation Unit reports, is the result of a cooperative effort of permanent staff and consultants. In addition to those whose names appear on the cover, Margaret Scorza has reviewed and corrected reports, coordinated the editing and production process, and contributed to the quality of the work in innumerable ways. Karen Chasin has spent many hours creating, correcting, and maintaining data files. Joseph Rivera has worked intensely to produce, correct, duplicate, and disseminate reports. Without their able and faithful participation the unit could not have handled such a large volume of work and still produced quality evaluation reports.

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PROJECT IMPACT

NEW UTRECHT HIGH SCHOOL

Location:	1601 80th Street Brooklyn, New York 11214
Year of Operation:	1982-1983, third of three years of funding
Target Language:	Italian
Number of Participants:	Approximately 200 students each semester
Principal:	Michael Russo
Coordinator:	Joseph Rizzi

This report evaluates Project IMPACT in its third and final year of funding. Because it is an established program that has already been described in detail in reports on its first two years of operation, the following will focus on changes that have taken place in 1982-83, and will not repeat some of the detail contained in previous reports.

I. DEMOGRAPHIC CONTEXT

COMMUNITY SETTING

New Utrecht High School is located in the Bensonhurst section of Brooklyn, a neighborhood with the greatest concentration of Italian-American in the United States. It is primarily a working-class residential area with small apartment buildings and single- and two-family houses. It is within walking distance of many stores, including various Italian bakeries, butchers, and other specialty shops. Near several bus lines and the B.M.T. subway line, it is accessible for those students who do not live in the immediate vicinity.

New Utrecht is located in District 20, about 50 percent of whose intermediate and high school students are of Italian heritage. Students attend from Dyker Heights, Bay Ridge, Boro Park, and Bensonhurst. Although the district contains many Jewish students, primarily in Boro Park, they, for the most part, attend religious schools.

SCHOOL SETTING

Built in 1925, the school building is adequate in general appearance, although peeling paint is a common sight in classrooms. A large athletic field adjoins the school. The program coordinator and secretary share a small office with the chairperson of the foreign language department. Next to it is the bilingual resource center, which contains books and other program-related materials for staff and student use. The curriculum specialists, family assistants, and teacher trainer/resource teacher use this room as an office.

New Utrecht has a total student body of 2,843.* Of these students, 69 percent are white, 13 percent are black, 15 percent are Hispanic, and 3 percent are Asian. One of the most significant changes in the student body over the last three years has been the increase in Hispanic students. While only a few attended New Utrecht three years ago, these students now represent 15 percent of the student body. The increase resulted from the decision to make New Utrecht an option school for students from Sunset Park in order to achieve greater integration of the overwhelmingly white student body.

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*Source: Pupil Ethnic Composition Report, October, 1982; Office of Student Information Services, Board of Education of the City of New York.

Thirty-five percent of the students are in the "low income" category, according to federal poverty criteria. Academically, one-third of the students perform at two years or more below level in reading; almost one-half perform at this level in math.

II. STUDENT CHARACTERISTICS

The program serves approximately 200 students. Table 1 presents a breakdown of students, for whom information was provided, by sex and grade: 31 are in the ninth grade, 71 in the tenth grade, 48 in the eleventh grade, and 20 in the twelfth grade. Table 2 presents the distribution of students by age and grade. Thirty-eight were discharged during the school year.

TABLE 1

Number and Percent of Program Students by Sex and Grade

Grade	Number Male Students	Percent of Grade	Number Female Students	Percent of Grade	Total Number	Percent of All Students
9	22	71	9	29	31	18
10	38	54	33	46	71	42
11	14	29	34	71	48	28
12	9	45	11	55	20	12
TOTAL	83	49[a]	87	51[a]	170	100

[a]Percent of all students.

- Male and female students are unqually distributed by grade, but equally distributed in the program as a whole.
- Most program students are in the tenth grade.

TABLE 2

Number of Students by Age and Grade

Age	Grade 9	Grade 10	Grade 11	Grade 12	Total
14	10	1	0	0	11
15	11	12	2	0	25
16	6	40	18	0	64
17	4	13	21	8	46
18	0	4	6	9	19
19	0	1	0	3	4
20	0	0	1	0	1
TOTAL	31	71	48	20	170
Overage Students					
Number	10	18	7	3	38
Percent	32	25	15	15	22

Note. Shaded boxes indicate expected age range for grade.

- Twenty-two percent of the program students are overage for their grade.
- The highest percentage of overage students occurs in the ninth grade.

Project IMPACT serves Italian-dominant students who score below the twenty-first percentile on the Language Assessment Battery (LAB) or who request to be in the program. Nearly all program students were born in Italy. The vast majority of them, 75-80 percent, have been in the United States for less than four years. Most have their primary and most of their secondary education in Italy. All speak Italian at home as their first language. Table 3 shows the time spent by students in the bilingual program.

Students have a wide range of literacy in both English and Italian. Some are minimally competent in Italian, others are highly literate. Staff estimated that ten were at a low level of literacy in Italian. Student proficiency in English ranges from no knowledge to proficient. Some students are English dominant, but have opted to be in the program because they are attracted to the services offered and want to be with their friends. These students have special problems, because they fit into neither the bilingual program nor the mainstream. Their English is not strong enough for them to function successfully in the mainstream. Because they have weak native language skills and can speak Italian but not read it well, they have similar difficulties in the bilingual program. Because these students are seen as potential dropouts, approximately 15 of them were grouped this year in classes in which teachers were able to work with them at their level.

TABLE 3

Time Spent in the Bilingual Program[a]
(As of June, 1983)

Time Spent in Bilingual Program	Number of Students				Totals
	Grade 9	Grade 10	Grade 11	Grade 12	
<1 Academic Year	1	1	0	0	2
1 Academic Year	22	26	4	0	52
2 Academic Years	6	35	9	1	51
3 Academic Years	0	6	34	1	41
4 Academic Years[b]	1	2	0	17	20
5 Academic Years[b]	0	0	0	1	1
TOTALS	30	70	47	20	167

[a]Rounded to the nearest year.

[b]Reflects participation in previous bilingual program.

- Thirty-two percent of the students had been in the program for one year or less.
- Twenty-five percent of the students had been enrolled in the program for three years.

III. PROGRAM DESCRIPTION

PROGRAM OBJECTIVES

The following are student achievement and attendance objectives for Project IMPACT:

Objective*	Instrument
1. Program students will show a significant gain in reading and comprehension of the English language.	Stanford Achievement Test (Levels II and III)
2. Program students will show a significant gain in native language arts (Italian).	New York City-Wide Examination in Italian (Level II); New York Regents Examination in Italian (Level III)
3. Eighty percent of program students enrolled in mathematics, science, and social studies courses will earn a passing grade.	Teacher-developed tests
4. The attendance rate of program students will be significantly higher than the total schoolwide attendance rate.	School attendance register

PROGRAM PHILOSOPHY

The program is a transitional one. As the principal said, the target is to mainstream students within a year or two of entering the program. Great emphasis is put on the need for students to retain their Italian pride and culture at the same time that they are learning English. The program receives the full support of the principal, who originally initiated bilingual education for Italian students at New Utrecht.

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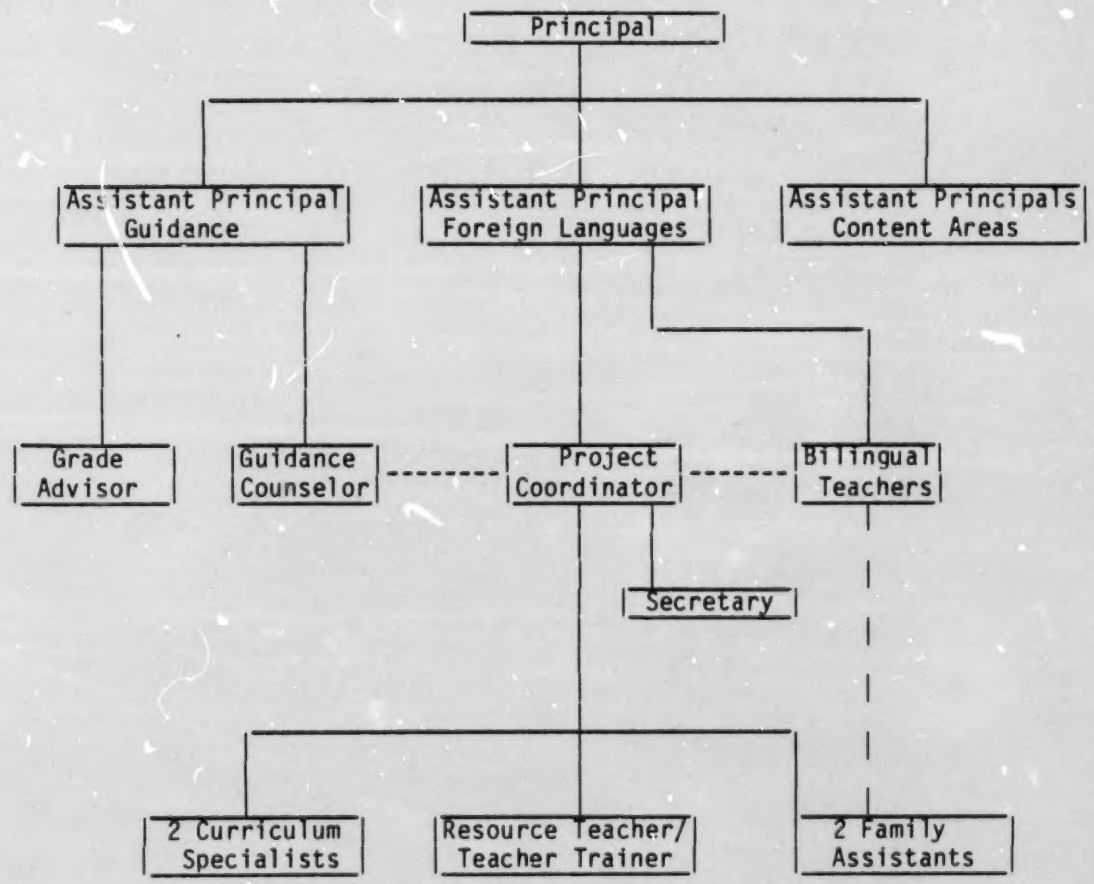
*These objectives are revisions of those originally proposed in 1980. They were modified in consultation with the project director to make possible their measurement on the basis of obtainable data.

ORGANIZATION AND STRUCTURE

The project coordinator is supervised by the assistant principal for foreign languages. The coordinator is, however, in charge of day-to-day program operations. Figure 1 shows how the program is organized within New Utrecht.

FIGURE 1

Project IMPACT Organization



FUNDING

Table 4 indicates funding for instructional and non-instructional staff.

TABLE 4

Funding for Instructional and Non-Instructional Staff[a]

Title/Position	Tax Levy	Mod. 5B	Title VII	T.P.R.C.
Administrator/ Supervisor	.2			
Bilingual Grade Advisor		.2		
Teacher: Bilingual Content Area	1.0	.4		
Teacher: E.S.L.	1.8			.2
Teacher: N.L.A.	.4			
Teacher: English Content Area	1.2			
Curriculum Specialist			2.0	
Family Assistant			2.0	
Project Director			1.0	
Resource Teacher/ Teacher Trainer			1.0	
Bilingual Secretary			1.0	

[a]Source: High School Personnel Inventory for Bilingual/E.S.L. Programs, April, 1983; Division of High Schools, New York City Public Schools.

Cuts in Title VII funding since the 1981-82 year have resulted in the reassignment of one curriculum specialist and one guidance counselor. Both are now working on tax-levy positions rather than as part of project staff.

STAFF CHARACTERISTICS

Appendix A lists characteristics of project staff. All project staff is fully bilingual. During the past year, teachers of industrial arts, secretarial studies, and social studies were not bilingual. These teachers are assisted by the family assistants and, periodically, by the secretarial studies curriculum development specialist; both are available to work with individual students and, where needed, to translate material into Italian. Neither of the family assistants is assigned to specific classes on a regular basis. One of the family assistants does frequent home visits and is therefore often unavailable for classroom assignments. Despite its slightly reduced size during the 1982-83 year, the staff is extremely stable.

IV. INSTRUCTIONAL COMPONENT

PLACEMENT AND PROGRAMMING

Placement and programming is done on the basis of LAB test scores, personal interviews, and teacher recommendations. The program is able to handle all eligible Italian students. Some students who are no longer enrolled in program courses continue to receive guidance services from the program; achievement data for these students are not included in this report. Some students are enrolled only in native language studies courses. Mainstreaming usually begins with mathematics classes.

NATIVE LANGUAGE COURSES

Table 5 lists the native language classes given in the fall and spring semesters. All program students are enrolled in these classes, which are designed to improve native language skills, and in the case of Travel and Tourism, to provide vocational training. Classes are held for five periods each week.

TABLE 5

Instruction in the Native Language (Fall and Spring)

Course Title	No. of Classes		Average Class Reg.		Description	Curriculum or Material in Use
	Fall	Spring	Fall	Spring		
Italian Native Language	3	3	27	26	Survey of Ital. Lit. & Adv. Grammar	Bd. of Ed. Level V
Travel and Tourism	1	1	27	29	Ticket reserv. business letters	Developed by staff

A member of the evaluation team observed two N.L.A. classes. The N.L.A. travel class was reviewing material from the Official Airline Guide by replying to questions on a worksheet and discussing the answers. Some students take it in order to improve their Italian, while others take it as a vocational course. Two of the 25 students registered are mainstream students who are taking the course as an elective. Working without a paraprofessional, the teacher used material in Italian and English and switched back and forth frequently from one language to the other. Italian was used approximately 70 percent of the time; it was used almost entirely during the first part of the class, with English being used increasingly thereafter. Most of the students seemed quite proficient in English. Student language usage seemed determined primarily by the language used by the teacher in asking a question or giving a direction. Students were very attentive and highly motivated.

The N.L.A. literature class for tenth and eleventh graders was involved in an animated discussion of Come Le Foglie, a play edited for third-year high school students. The discussion followed the reading aloud of a scene from the play. All of the 23 students registered were present. The class was conducted entirely in Italian; at the end, the teacher translated a few words into English. She said that at the beginning of the year two or three students had had language problems, but that they had improved.

CONTENT-AREA COURSES

Table 6 lists all content-area courses given during the 1982-83 year. Program students take bilingual content-area courses in mathematics, science, social studies, typing, and vocational subjects. Each semester, one class is offered in each area listed five periods per week. Classes

TABLE 6

Bilingual Instruction in Subject Areas (Fall)

Course Title	Average Register	% of Class Time Italian is Used	Paraprofessional Assistance (Y/N)	% of Materials in Native Language
Bilingual Typing	25	50	No	30
General Science	24	40	No	20
Jewelry Making	21	30	Yes	25
Building Trades Metal	19	30	Yes	20
World Studies	27	50	No	30
Economics	23	50	No	30
Algebra	17	50	No	25
Math Remedial	19	50	No	25
Math Lab	13	50	No	25

TABLE 6

Bilingual Instruction in Subject Areas (Spring)

Course Title	Average Register	% of Class Time Italian is Used	Paraprofessional Assistance (Y/N)	% of Materials in Native Language
World History	23	50	Yes	50
American History I	27	50	Yes	20
American History II	25	50	Yes	20
Metal Work	21	50	No	20
Biology	27	50	Yes	30
Typing	23	50	No	50
Algebra I	28	40	Yes	20
Algebra II	27	40	Yes	20
Geometry	21	40	Yes	20
Math Lab	19	40	Yes	20

are taught in Italian and English, are exclusively for program students, and use materials which are appropriate to the students' reading levels and parallel mainstream curriculum. An evaluator observed classes in each of these subjects.

The bilingual mathematics class is a laboratory class designed for students who are two or more years below grade level. The 12 students registered are in the ninth, tenth, and eleventh grades; seven usually attend and four were present on the day of the observation. Sitting at clustered desks, students worked individually on Regents Competency Tests (R.C.T.). The class is the equivalent of a Chapter I mathematics laboratory. Since two of the students speak no English and others have difficulty with that language, they would have serious problems in a Chapter I class where they would have to deal simultaneously with their mathematics and English language skills.

The bilingual social studies class, an American Studies class for tenth and eleventh graders, spent most of the period taking a quiz. The observer was, however, able to talk with the teacher and look at some of the materials used. The teacher uses a text minimally and prefers to use Board of Education handouts, all in English. Although he uses some Italian, he prefers to use English in class. He feels that the students are not all confident in English, largely because they are not reinforced in the use of it at home. At the same time, he observed that only one student in the class, newly arrived from South America, actually had trouble communicating in English. At least half of the students taking the quiz chose to respond to the essay questions in English, rather than in Italian.

The bilingual typing class is comprised of 20 students who are at different language levels. Only ten were there on the day of the observation; as in several other classes observed on that day, attendance was lower than usual because it was the Friday after Brooklyn-Queens Day, when program students had gone on an outing to Bear Mountain. The curriculum development specialist was present and worked individually with a few students whose facility with English was less than that of the others in the class. Students were using new electric Coronomatic 8000 typewriters on which they were supposed to type a letter in 20 minutes and indicate that an enclosure was included. The letter was in English, as was the text, Type Right! Although the "do now," a few key words, and the final explanation were presented in Italian, 90 percent of the class was conducted in English.

ENGLISH AS A SECOND LANGUAGE

Table 7 lists the E.S.L. classes given during the 1982-83 year. E.S.L. is offered at five levels for five periods each week: the first four levels, basic English and speech laboratory classes, meet for double periods each day; the fifth level meets for a single period. The E.S.L. program is tax-levy funded. Programming for the classes has been done on the basis of how long a student has been in the country, although an alternative testing system for placement is being considered for September, 1983. One teacher estimated that three or four students per class were not properly placed. Placement problems are, however, very effectively addressed by having all of the double-period E.S.L. classes meet at the same time, so that a student can be moved from one level to another without necessitating a major program shift.

An evaluator observed two E.S.L. classes. The teacher in the E.S.L. 2 class moved the students from vocabulary recognition to sentence and then paragraph writing. As of January, 1983, all of the students in this class had been in the country for five months or less. Originally, ten or twelve were on the roster; now 24 are registered, including students who have been in the country one to three weeks. Students used a basic E.S.L. test, Orientation in American English: Reader I. The teacher in the E.S.L. 5 class led a discussion on how the students liked computer dating after the students had copied and answered questions on their feelings about it. The 22 students in this class had been placed on the recommendation of their previous teacher and were in different grades in school.

TABLE 7

Instruction in English as a Second Language
and English Reading

Course Title and Level	No. of Classes		Average Class Reg.		Description	Curriculum or Material in Use
	Fall	Spring	Fall	Spring		
E.S.L. 1	2	1	25	25	Development of listening, speaking, reading, and writing skills in English	New York City Board of Education Curriculum
E.S.L. 2	1		27			
E.S.L. 3	1	1	24	26		
E.S.L. 4	1	1	23	24		
E.S.L. 5		1		23		
Speech Lab 1	2	1	25	21	Development of fluency, acquisition of native-like accent, intonation and speech patterns	" "
Speech Lab 2	1	1	25	19		

MAINSTREAM COURSES

All program students take art, music, and health education in the mainstream. Table 8 lists mainstream courses in which program students were enrolled during the 1982-83 year.

A member of the evaluation team observed mainstream classes in jewelry-making and computers. Although it was not given in the spring 1983 semester, a bilingual elementary jewelry course has been offered. Three or four program students are in the advanced class. Although students have to pay for some materials, the class seems very well equipped. The students were very involved in working on their individual projects. Students in the computer class were similarly motivated. The program curriculum specialist works with the computer teacher to develop material appropriate for the bilingual students. The observer saw some of the sample program developed by these students: one was a program on the capitol cities of Italian provinces, another was a program on sentence formation in Italian which could help other students learn spelling, word order, and punctuation. The class had 15 students. Class size is partly determined by the number of Commodore computers available. After a year of basic computer language, students can take a second year as well as independent study. The curriculum specialist noted that their work in computer classes had been very helpful to program students who later wanted to go on to technical career training at the college level.

TABLE 8

Enrollment In Mainstream Classes

Fall Classes	Number of Program Students Enrolled	Spring Classes	Number of Program Students Enrolled
Pre-Algebra	22	Pre-Algebra	8
General Math	1	11th-Year Math	2
Geometry	18	General Science	16
11th Year Math	8	Geology	1
12th year Math	1	Civics	2
Computer Math	7		
Biology	36		
Chemistry	6		
Physics	1		
Geology	1		
Civics	5		
American History	20		
World History	58		

•A significantly higher number of students were enrolled in mainstream courses in the fall than in the spring semester.

V. NON-INSTRUCTIONAL COMPONENT

CURRICULUM DEVELOPMENT

Curriculum development has not been a major focus of the project in its last year of operation. During the 1982-83 year, the mathematics/computer curriculum specialist modified the lesson-by-lesson curriculum he had previously developed in basic computer language. The secretarial studies curriculum specialist developed additional exercises in typing; detailed curriculum for Typing 1 and 2 had been developed during the 1981-82 year.

By the third year of the program, project staff had completed the development or adaptation of curriculum in the following areas: civil service, stenography I and transcription, typing, carpentry, jewelry-making, plumbing, electricity, sheet metal, travel/tourism, computer studies, algebra, geometry, American history, world history, biology, general science, and chemistry.

SUPPORTIVE SERVICES

Supportive services are given on a regular basis by all project staff. One of the two family assistants visits the families of most program students during the school day, as well as during evenings and weekends. She notes that the families tend to feel more comfortable when she visits them than if they had to go to the school. She also does referrals to social service, medical, and other agencies. As liaison between the program and Brooklyn College, she facilitates the application process and transition to post-secondary education for program students.

Since many of the teachers, guidance counselors, and administrators in the school as a whole speak Italian, program students have many resources for personal, vocational, and educational assistance. During the evaluation visit, the mathematics curriculum specialist tutored a program student who had to take the R.C.T.

STAFF DEVELOPMENT

Staff development is done primarily on an informal basis. The teacher trainer meets with teachers before a unit is presented. In working with non-Italian teachers, he often deals with cultural issues: a science teacher, for instance, might use as an example a plant unfamiliar to Italian students and thereby not be immediately able to make the necessary scientific point. The teacher trainer reports meeting with social studies, mathematics, E.S.L., science, and industrial arts teachers. One teacher of a bilingual class noted the absence of in-service training and indicated that it would be a good thing to take place.

Development activities which take place outside the school are attendance at workshops, professional conferences, and university courses. During 1982-83, program staff attended a workshop in the field of computer science, and conferences sponsored by the Italian Bilingual/Bicultural Education Association, the State Association of Bilingual Education, and the Bilingual Education Service Center.

In addition, one of the curriculum specialists, the teacher trainer, a family assistant, and the secretary all attended university courses to enhance their professional development (see Appendix B).

PARENTAL AND COMMUNITY INVOLVEMENT

Project staff keeps in contact with parents through notices in Italian and English, home visits, and phone calls. Involvement in the Parent/Student/Community Advisory Committee was cited by the coordinator as a major problem. Although parent attendance was good in the fall, with 20 parents attending the September, October, and November meetings, it got progressively worse. Parent involvement is, however, demonstrated by their interest in extracurricular activities where they are willing to help with the food, sew costumes, etc.

AFFECTIVE DOMAIN

The coordinator cites a lower dropout rate than in the school as a whole, an increase in college applications, and an increase in participation in extracurricular activities as especially positive results of the program. Project staff works additional hours on a number of major extracurricular projects in which students are very enthusiastically involved. The yearly bilingual project this year included a rendition of Don Giovanni, computer, industrial arts, and secretarial studies demonstrations, and artwork. Performed at feeder schools before its performance at New Utrecht, it was videotaped. The coordinator estimates that approximately 500-700 parents, community people, and Board of Education representatives have attended it in the last three or four years. Students also financed IMPACT, the program's bilingual literary and art journal, by organizing a dance which earned $600. On Brooklyn/Queens Day, 150 students and project staff took three chartered buses to Bear Mountain. Students are also involved in organizing an annual Christmas breakfast, dances, and Italian

festivals. Program students also participated in the Columbus Day Parade.

Students in classes are consistently attentive and generally well-behaved. In one observed class, a student who was disruptive was immediately sent to the office. Many students work after school.

VI. FINDINGS: STUDENT ACHIEVEMENT AND ATTENDANCE

The following section presents the results of the testing to measure student achievement, and attendance information compared with that of the school as a whole. The original evaluation design had to be modified in consultation with the project director because it was not always possible to obtain data for an appropriate comparison group of non-program students. This necessitated the use of the correlated t-test model in evaluating the efficacy of certain portions of the project. This data analytic strategy involved pre-testing students early in the school year and re-testing students again on the same measure near the end of the year. The model assesses whether or not test scores on the post-test were significantly greater than pre-test scores. Additionally, other comparative statistics were calculated in accordance with the following revised objectives:

Objective	Instrument
1. Program students will show a significant gain in reading and comprehension of the English language.	Stanford Achievement Test (Levels II and III)
2. The percentage of program students passing a standardized native language examination will be greater than the passing rate of mainstream students.	New York Regents Examination in Italian (Levels I and III)
3. Eighty percent of program students enrolled in mathematics, science, and social studies courses will earn a passing grade.	Teacher-developed tests
4. The attendance rate of program students will be significantly higher than the total school-wide attendance rate.	School attendance register

ENGLISH READING AND COMPREHENSION

In conjunction with the first objective, pre- and post-test scores on the Stanford Achievement Test (SAT), Levels II and III, were analyzed using the correlated t-test model.

Data were incomplete or missing for 75 (43.9 percent) program students. Table 9 presents means, standard deviations, and t-test results for both of the two SAT levels. Students taking Level III exams scored significantly higher on the post-test ($p<.0001$). Level II students' post-tests did not differ significantly ($p=.228$) from pre-tests, despite a very large mean difference (32.83). This is a direct result of the small sample size, which tends to inflate the standard error.

Another index of improvement, the effect size was computed by dividing the difference between the means by the standard deviation of the differences between pre-test and post-test scores for each individual. This provides an index of improvement in standard deviation units and a change of 0.5 standard deviations or higher is generally considered to be a meaningful change. The effect size for Level III students was 1.15, indicating a substantial improvement in post-test scores.

Additional analysis were performed on Level III students to determine if differences existed among the different grade levels of students taking the examination. As evidenced in Table 9, post-test scores were significantly greater for all grades, on the SAT, Level III. Effect sizes were large for all grades, all greater than 1.03, indicating substantial improvement at each grade level, particularly at grade 9.

TABLE 9

English Reading Achievement

Significance of Mean Total Raw Score Differences Between Initial and Final Test Scores of Students with Full Instructional Treatment on the Stanford Achievement Test (SAT)

Test Level	Grade	N	Pre-Test Mean	Pre-Test Standard Deviation	Post-Test Mean	Post-Test Standard Deviation	Mean Difference	Corr. Pre/Post	T-Test	Level of Significance	Effect Size
II	-	6	114.7	32.48	147.5	23.02	32.83	.579	3.0	.228	NS
III	-	90	122.4	23.67	136.62	20.1	14.18	.854	10.91	<.0001	1.15
Breakdown by grade for Level III											
III	9	14	121.93	23.74	138.36	18.82	16.43	.902	5.80	<.001	1.55
III	10	52	122.60	22.94	136.67	19.67	14.07	.834	8.0	<.001	1.11
III	11	17	120.94	26.08	131.58	22.3	10.64	.938	4.72	<.001	1.14
III	12	7	126.00	27.96	145.00	21.3	19.00	.752	2.73	.017	1.03

NATIVE LANGUAGE READING AND COMPREHENSION (ITALIAN)

Data for the second objective was provided by the project coordinator. The 100 percent passing rate for program students (n=24) was greater than that of non-program students (80.2 percent, n=81) on the New York State Regents Examination in Italian.

STUDENT ACHIEVEMENT IN MATHEMATICS, SCIENCE, AND SOCIAL STUDIES

Table 10 presents passing rates for program students in each of the content areas of course instruction for both the fall and spring. Program objectives of an 80 percent passing rate were achieved for all three content areas in both semesters.

Passing rates for the fall and spring terms, respectively were 95.7 percent and 100 percent in mathematics, 97.3 percent and 92 percent in science, and 95.7 percent and 92.7 percent in social studies.

TABLE 10

Number of Italian-Speaking Program Students Attending Courses and Percent Passing Teacher-Made Examinations in Content-Area Subjects[a]

Content Area	Grade 9		Grade 10		Grade 11		Grade 12		Total	
	N	% Passing	N	% Passing	N	% Passing	N	% Passing	N	% Passing
					Fall					
Mathematics	14	100	43	90.7	27	100	8	100	92	95.7
Science	12	100	40	95.0	20	100	3	100	75	97.3
Social Studies	11	100	44	90.9	32	100	7	100	94	95.7
					Spring					
Mathematics	8	100	16	100	17	100	0	0	41	100
Science	4	100	15	86.7	8	100	1	100	28	92.9
Social Studies	7	100	26	84.6	15	100	7	100	55	92.7

[a]Mathematics courses include remedial mathematics, general mathematics, pre-algebra, algebra, geometry, eleventh- and twelfth-year mathematics, and computer mathematics. Science courses include general science, biology, chemistry, physics, and geology. Social studies courses include civics, economics, world geography, American history, and world history.

STUDENT ATTENDANCE

The average total attendance rate of program students (n=160) is presented and compared with the school-wide attendance rate (n=3,445) in Table 11. Since the attendance rate for program students was included in the school-wide attendance rate, a special procedure was used in computing the usual statistical test for a significant difference between two proportions. In the z test formula below, p is the attendance rate for program students and P is the expected proportion (the school's attendance rate). Attendance is considered a dichotomous variable as it has the two values "present/absent."

$$z = \frac{p - P}{\sqrt{\frac{PQ}{N}}}$$

In conjunction with the fourth objective, as presented in Table 11, program students had a significantly higher rate of attendance ($p<.05$) than did the school population as a whole.

TABLE 11

Significance of the Difference Between the Attendance Percentage of Program Students and the Attendance Percentage of the School

Grade	Number of Students	Mean Percentage	Standard Deviation
9	27	79.37	17.96
10	69	82.96	19.68
11	47	86.30	14.17
12	17	88.35	5.93
TOTAL	160	83.90	16.96

Average School-Wide Attendance Percentage: 77.49

Percentage Difference = 6.41 z = 1.94 p = <.05

VII. CONCLUSIONS AND RECOMMENDATIONS

Project IMPACT is an effective, well-established program that has been of great benefit to its students. It recently received a Ford Foundation grant for excellence, along with two other special programs at New Utrecht. Since project funding ended with the 1982-83 year, the school used Project IMPACT as a base for a new funded project for the 1983-84 year which will serve Italian, Hispanic, and Chinese students. Based on the information provided by the administration, faculty, and students, as well as data collected from interviews and classroom observations, the following recommendations are offered for extended bilingual services at New Utrecht:

1. Teacher and staff training efforts need to be expanded and formalized. While project staff and much New Utrecht faculty and administration have a long history of service to Italian students and are justifiably proud of that record, the increase of Hispanic and Chinese students is a relatively recent phenomenon at the school. Thus far, project staff has been valuable in sensitizing non-Italians to the particular cultural background and problems of Italian students. With the new project, however, they will themselves need such training to work most effectively with Hispanic and Chinese students. Similar training will also need to be done outside the program itself. Whereas Hispanic and Chinese staff members will be added, their presence in itself will not address the major changes the program will have to undergo in its transition from an Italian program to one seeking to serve three language groups.

2. Like staff training, curriculum development has not been a major programmatic focus during 1982-83 year. The expanded program will make this too a priority. In addition, it will encourage project staff to work closely with those schools which have already have developed extensive curriculum material in Spanish and Chinese.

3. The need remains for the program to refine its record-keeping process. As the program population ceases to be homogeneous, individual staff members will no longer have a comprehensive overview of students' successes and problems; different staff members will be working intensively with students from each of the three language groups. Improved record-keeping will therefore be an even more necessary means of communication among those working on the project, and facilitate individualized services based on students' needs.

VIII. APPENDICES

APPENDIX A

Staff Characteristics: Professional and Paraprofessional Staffs

Function(s)	% Time for Each Function	Date Appt. to Each Function	Education (Degree)	Certification	License(s)	Total Yrs. Exp. in Education	Years Exp. Bilingual	Years Exp. E.S.L.
Coordinator	100	9/80	B.A., M.A. Bil. Ed. P.D. Admin.	NYC NYC	Ital. 7-12 Adm. Superv.	11	11	
Curriculum Specialist	100	9/80	B.S. Math	NYC	Math	9	11	
Curriculum Specialist	100	9/80	B.S. Sec. Studies	NYC	Sec. Studies	5	5	
Teacher Trainer	100	10/81	B.A. Span/Ital/Fr M.A. E.S.L.	NYC	Ital. 7-12 E.S.L. & Elem.	4	6	
Family Assistant								
Family Assistant								
Bilingual Secretary								

APPENDIX B

University Courses Attended by Staff (Professional and Paraprofessional)

Staff	Institution	Course	Frequency
Professional	New York University	Romance Linguistics	once a week
	Long Island University	Bilingual Admin.	twice a week
		School Law	twice a week
Paraprofessional	Kinsborough C.C.	Sci. of Nutrition	twice a week
		Intro. to Sociology	twice a week
	Kingsborough C.C.	Sci. of Nutrition	2 nights/week
		Political Sci.	2 nights/week
		Mathematics	4 days/week
		Health Education	4 days/week